

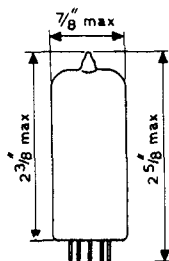
TRIODE-HEXODE FREQUENCY CONVERTER

GENERAL DATA

Cathode	Coated unipotential
Base	Small-button Noval 9-pin
Bulb	T6 $\frac{1}{2}$
Mounting position	Any

Basing Connections

- Pin 1 - Hexode grids No.2, No.4
- Pin 2 - Hexode grid No.1
- Pin 3 - Cathode, internal shield
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Internal connection
- Pin 7 - Hexode plate
- Pin 8 - Triode plate
- Pin 9 - Triode grid No.1, hexode grid No.3



GENERAL ELECTRICAL DATA

Heater voltage	6.3	volts
Heater current	0.3	amp

Direct Interelectrode Capacitances

Hexode grid No.1 to all other electrodes	3.8	$\mu\mu\text{F}$
Hexode plate to all other electrodes	9.2	$\mu\mu\text{F}$
Hexode grid No.1 to hexode plate	max. 0.1	$\mu\mu\text{F}$
Hexode grid No.1 to heater	max. 0.15	$\mu\mu\text{F}$
Cathode to triode grid, hexode grid No.3	5.6	$\mu\mu\text{F}$
Cathode to triode plate	2.4	$\mu\mu\text{F}$
Triode plate to triode grid, hexode grid No.3	1.4	$\mu\mu\text{F}$
Hexode grid No.1 to triode grid, hexode grid No.3	max. 0.35	$\mu\mu\text{F}$
Hexode plate to triode grid, hexode grid No.3	max. 0.2	$\mu\mu\text{F}$

MAXIMUM RATINGS(Design-Centre Values)

Hexode Section

Plate voltage(without current)	550 volts
Plate voltage	300 volts
Plate dissipation	1.5 watts
Grid No.2, No.4 voltage(without current)	550 volts
Grid No.2, No.4 voltage(plate current less than 1 mA)	300 volts
Grid No.2, No.4 voltage(plate current=3 mA)	125 volts
Grid No.2, No.4 dissipation	0.3 watts
Grid No.1 voltage at Grid No.1 current = +0.3 μA	-1.3 volts

Cathode current	10	mA
External grid No.1 resistance	3	megohms
External grid No.3 resistance	3	megohms
External heater-cathode resistance	20,000	ohms
Heater-cathode voltage	100	volts

Triode Section

Plate voltage (without current)	550	volts
Plate voltage	175	volts
Plate dissipation	0.8	watts
Grid No.1 voltage at grid No.1 current = + 0.3 μ A	-1.3	volts
Cathode current	6	mA
External grid resistance	3	megohms
External heater-cathode resistance	20,000	ohms
Heater-cathode voltage	100	volts

TYPICAL CHARACTERISTICS

Triode Section

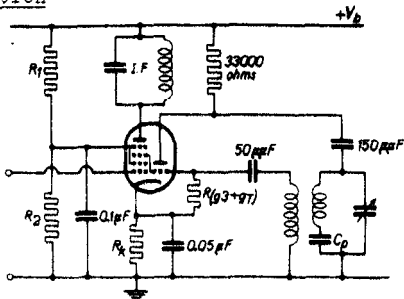
Plate voltage	100	volts
Grid voltage	0	volts
Plate current	10	mA
Mutual conductance	2800	μ mhos
Amplification factor	22	

TYPICAL OPERATING CONDITIONS

Triode Section as Oscillator

Supply voltage	250	250	volts
Plate resistor	33,000	33,000	ohms
Grid resistor	47,000	22,000	ohms
Grid current	200	350	μ A
Plate current	4.8	5.1	mA
R.M.S. oscillator voltage	8.0	8.0	volts
Effective mutual conductance	550	600	μ mhos

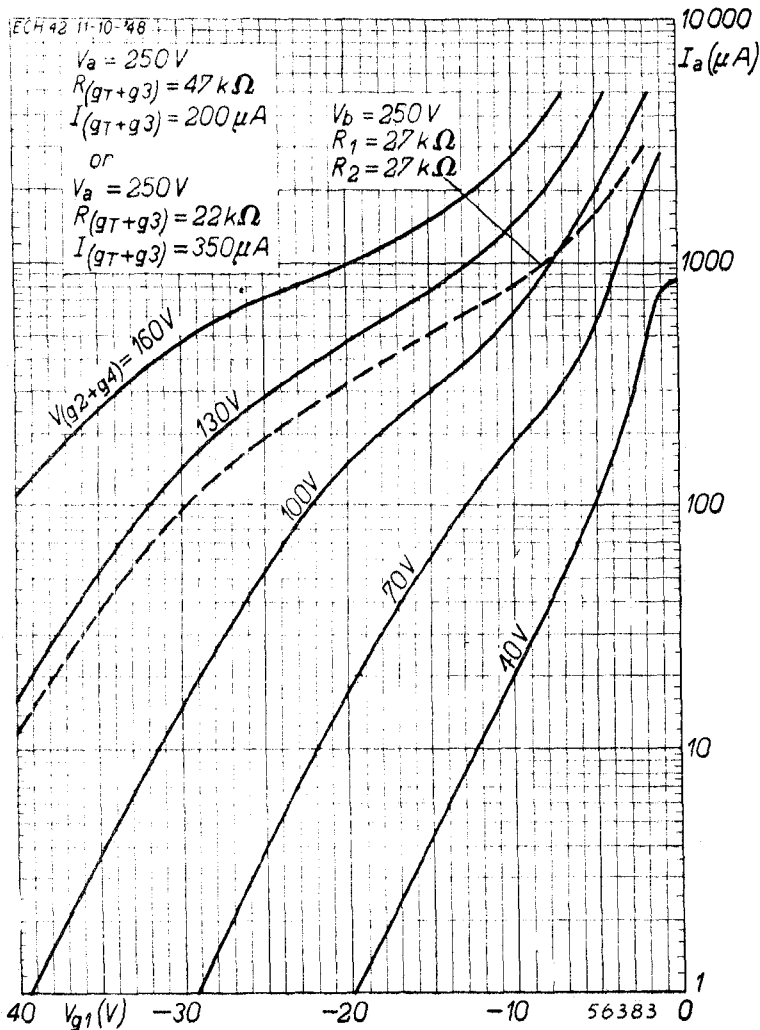
Hexode Section



Hexode plate and supply voltage	250	volts
R ₁ (see circuit diagram)	27,000	ohms
R ₂ (see circuit diagram)	27,000	ohms
Cathode resistor	180	ohms
Grid No.3, triode grid resistor	22,000	ohms
Grid No.3, triode grid current (see note 1)	350	μA
Grid No.1 voltage	-2	volts
Grid No.2, No.4 voltage	85	volts
Plate current	3.0	mA
Grid No.2, No.4 current	3.0	mA
Conversion conductance	750	μmhos
Plate resistance	min. 1.0	megohm
Equivalent noise resistance	100,000	ohms
Grid No.1 voltage for C.O1 of nominal conversion conductance with grid No.2, No.4 voltage = 124 V	-29	volts

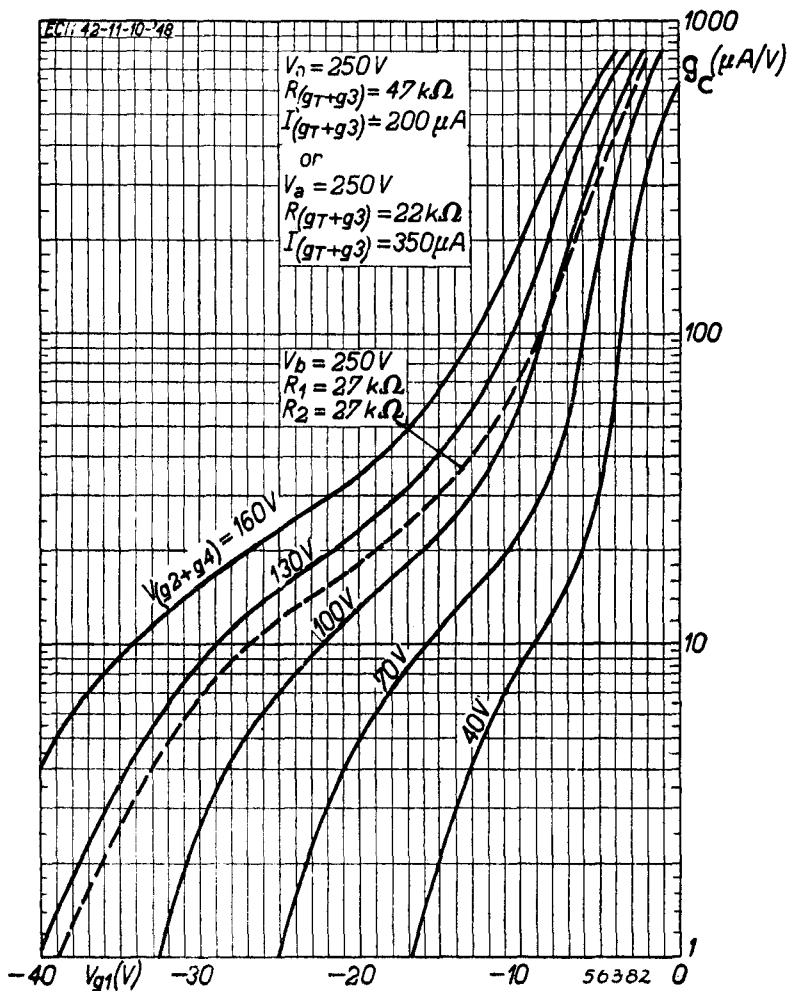
NOTES

1. With an alternative value of grid No.3, triode grid resistor of 47,000 ohms, the grid current should be adjusted to 200 μA.

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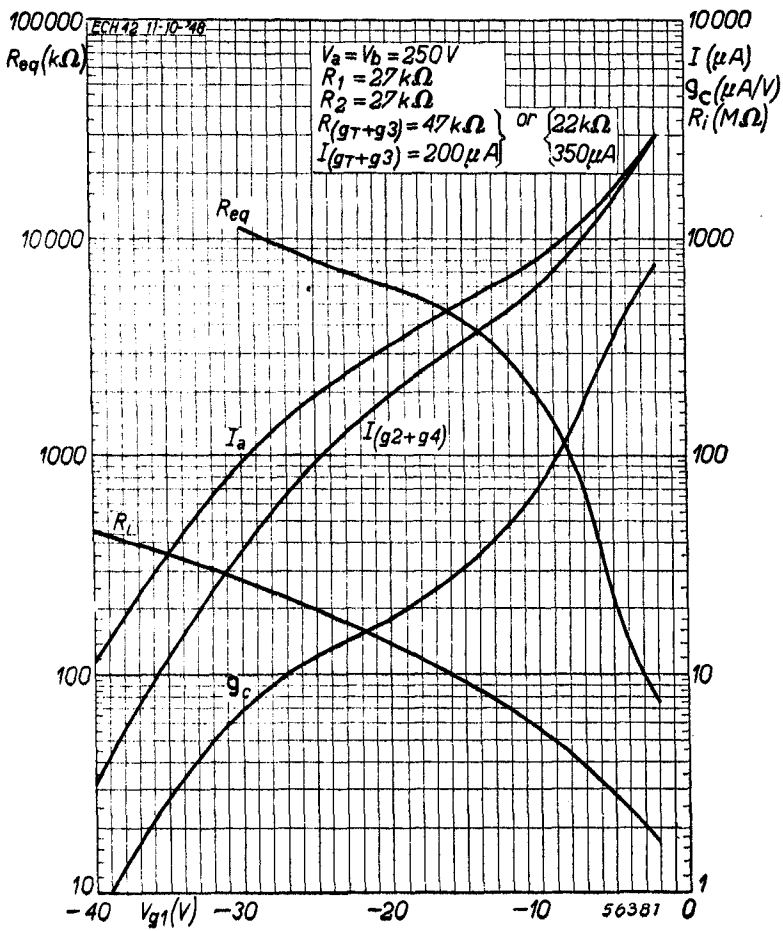
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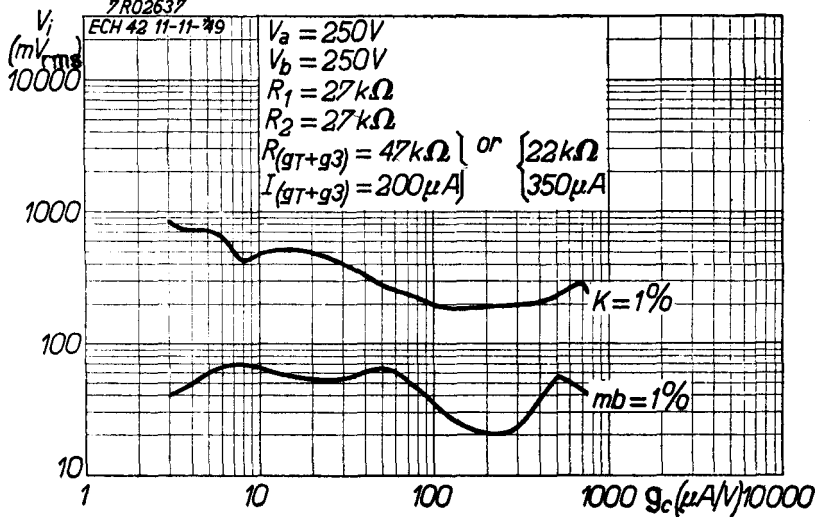


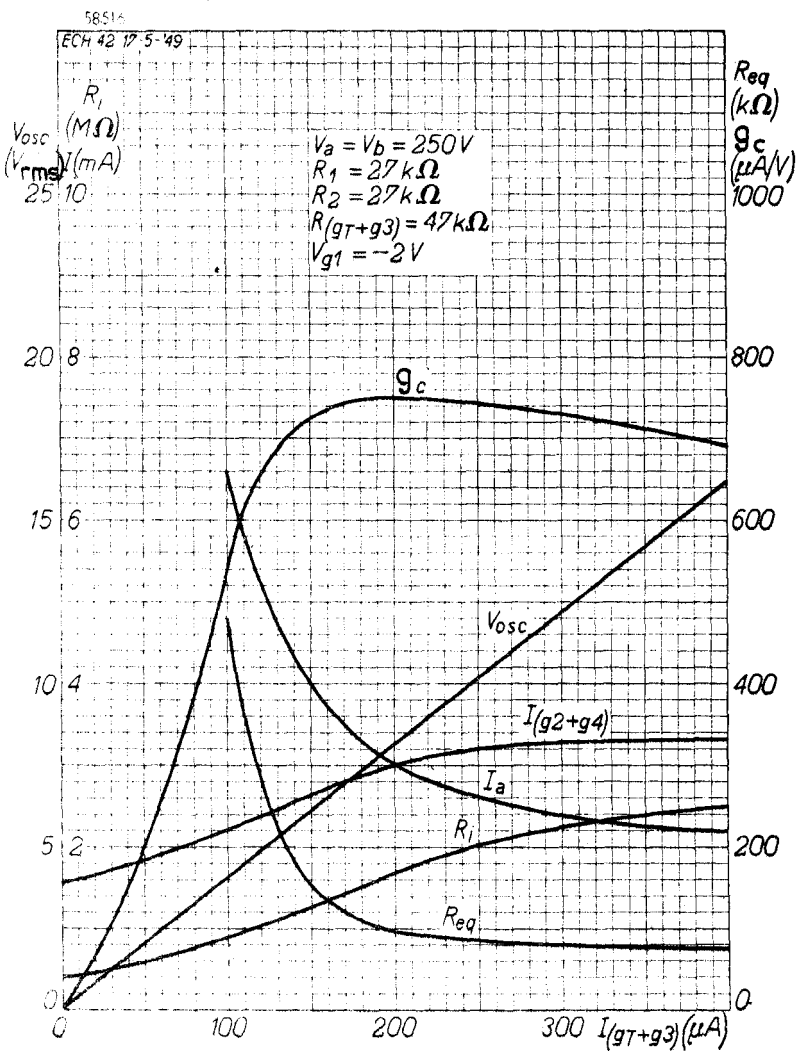
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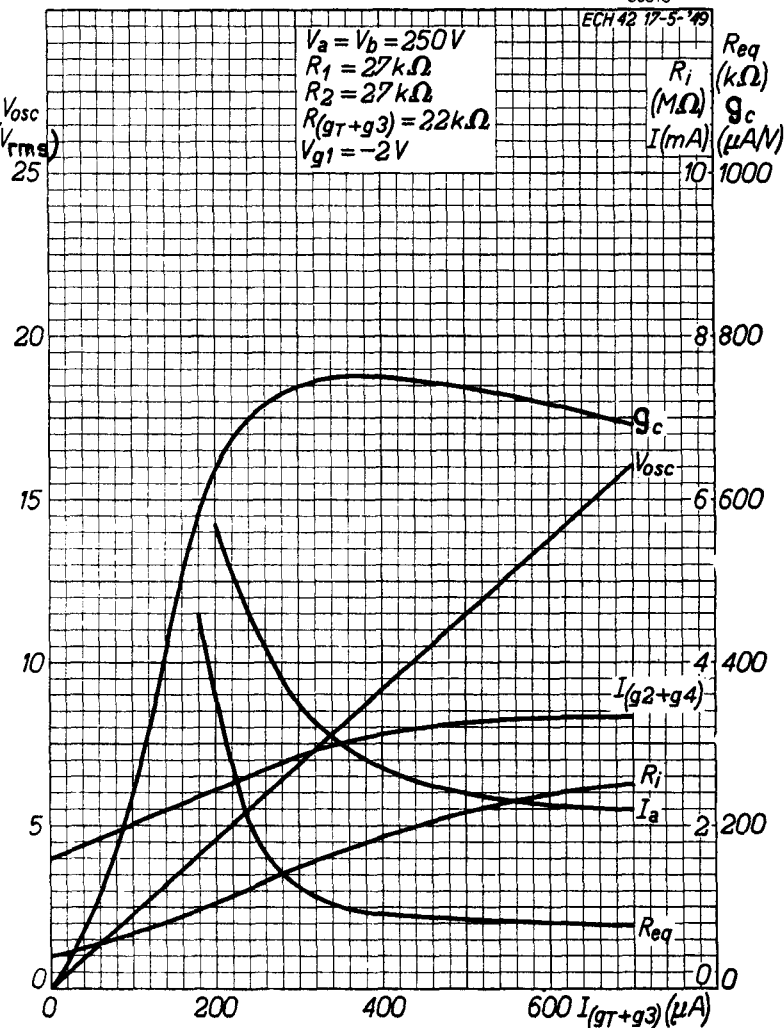


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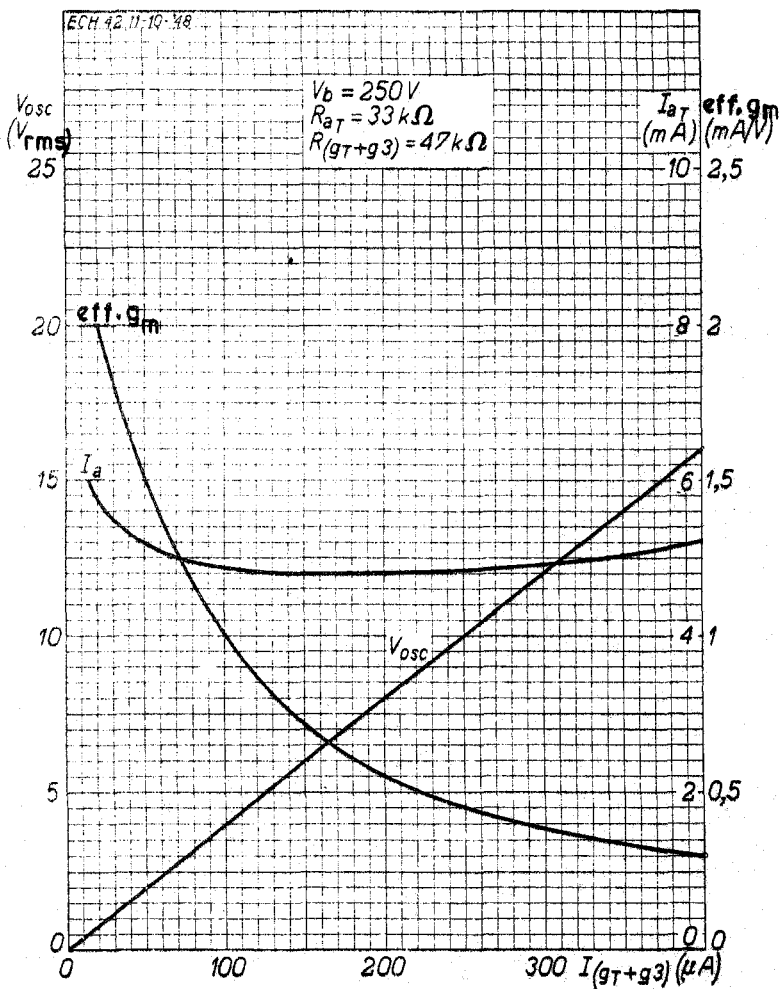
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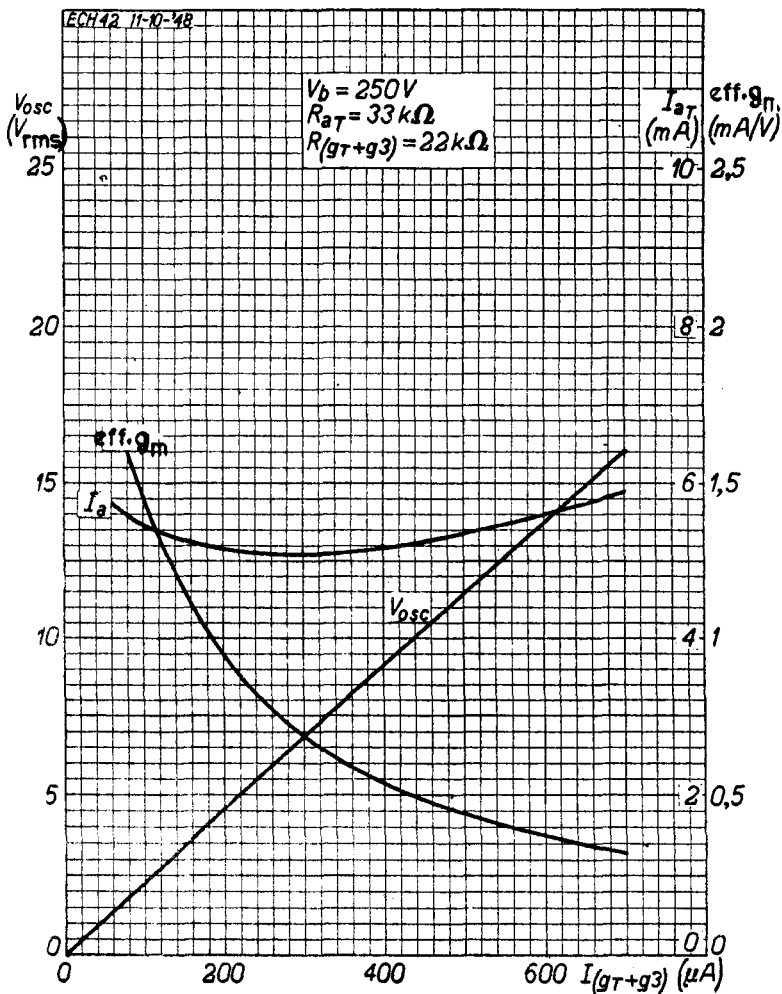


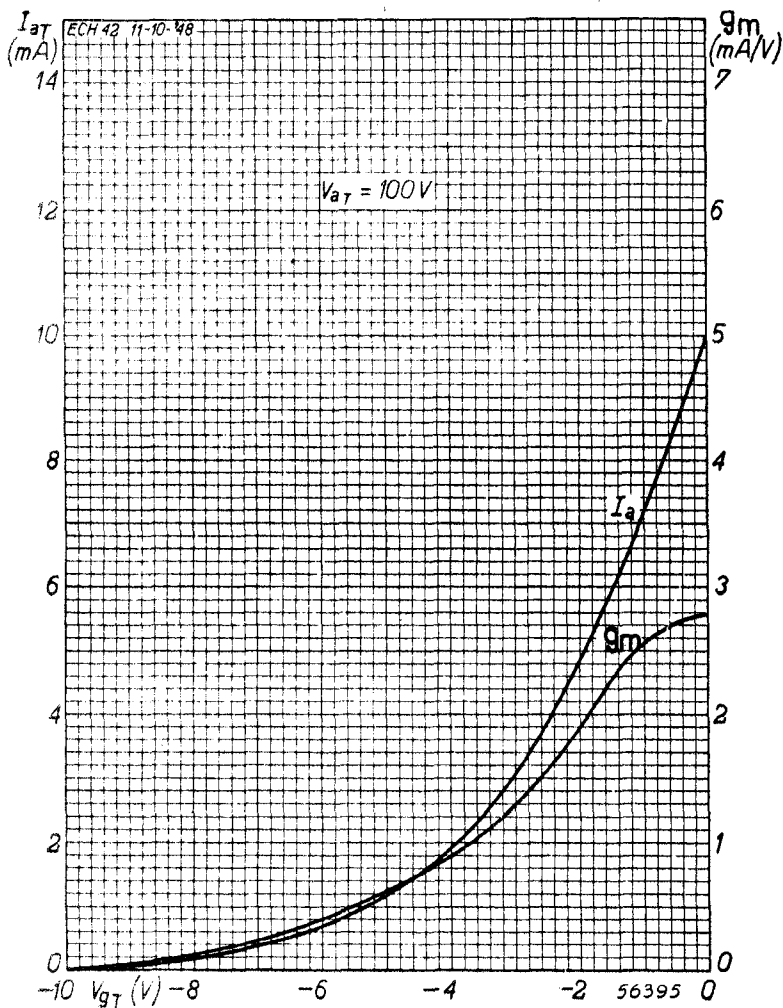
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